

## REMARKS

In response to the Office Action dated January 30, 2007, Applicant respectfully requests reconsideration based on the above amendments and the following remarks. Applicant respectfully submits that the claims as presented are in condition for allowance.

Claims 1-5, 7-10, 13-15 and 18-22 are pending in the present Application for consideration upon entry of the above amendments and following remarks.

Reconsideration and allowance of the claims are respectfully requested in view of the above amendments and the following remarks.

### Drawings and Specification

On page 2 of the Office action, the Examiner notes that current Figs. 3A and 6 (as being an enlarged view of driving signal wire and shorting bar of Fig. 3A) assign different designated numbers for the same elements. Particularly, numbers 321/322 and 132 are used for the "driving signal wire" and numbers 320 and 130 are used for the "shorting bar."

The Examiner also notes that Fig. 6 assigns same designated numbers for different elements. Particularly, both "first driving signal wire" and "second driving signal wire" are assigned the same number 132, and both the "first connecting line" and the "second connecting line" are assigned the same number 94.

In response, Applicant hereinabove amends Figures 3A, 3B, 4 and 6-9 and the specification to provide the figures with different designated numbers for each of different elements, to provide the same numbers for same elements and to provide consistency between the drawings and the specification.

Corrected drawing sheets for Figures 3A, 3B, 4 and 6-9 in compliance with 37 C.F.R. 1.121(d) are attached. The amended drawing sheet includes all of the figures appearing on the immediate prior version of the sheets. The replacement sheets are labeled "Replacement Sheet" in the page header (as per 37 C.F.R. §1.84(c)). Support for amendments to the drawings is at least found in the specification, the figures, and the claims as originally filed.

A substitute specification is provided with markings showing all the changes relative to the immediate version of the specification of record and a substitute specification in clean version (without markings). Support for amendments to the specification is at least found in the specification, the figures, and the claims as originally filed.

Particularly referring to page 17, lines 16-28 of the marked-up version, support for the amendments to the specification is found in originally filed Claims 11 and 12.

Consideration and entry of the amended Figures 3A, 3B, 4 and 6-9 and the substitute specification are respectfully requested.

**Claim Rejections Under 35 U.S.C. §112**

In the outstanding Office action, the Examiner has rejected Claims 1-5, 7-10, 13-15 and 18-22 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctively claim the subject matter, which Applicant regards as the invention.

**Claim 1**

The Examiner alleges that “first connecting line” cannot be in between “the first driving wire” and “the first display signal wire.” Applicant respectfully disagrees.

Claim 1 recites, *inter alia*,

“a plurality of first connecting lines disposed between the first driving signal wire and a part of the first display signal wire, and connected to the first driving signal wire;

wherein the first connecting lines are electrically disconnected from the part of the first display signal wire.”

Replacement sheet of FIG. 6 is an enlarged view of the driving signal wire and the shorting bar of FIG. 3A. In a non-limiting embodiment as illustrated in FIG. 6, “first driving signal wire” may be considered as first driving signal wire (e.g., lower/right gate driving signal 321), “first connecting lines” may be considered as connecting member (e.g., upper/shorter connecting member 94A) and “first display signal wire” may be considered as gate wire (e.g., upper gate wire 121).

A “part of the first display signal wire” of Claim 1 may be considered as a portion of the upper gate wire 121 (e.g., connecting portion 122) disposed between the cutting line L and the contact portion C1, such as illustrated in FIG. 6.

Applicant respectfully submits that the upper/shorter connecting member 94A is disposed between the lower/right gate driving signal 321 and a portion of upper gate wire 121 (e.g., connecting portion 122) between the cutting line L and the contact portion C1. That is, the upper/shorter connecting member 94A is connected to the first driving signal wire, e.g., the

lower/right gate driving signal 321. Therefore, Applicant respectfully submits that Replacement sheet of FIG. 6 clearly illustrates “a plurality of first connecting lines disposed between the first driving signal wire and a part of the first display signal wire, and connected to the first driving signal wire” of Claim 1.

The Examiner further alleges that a part of the “first signal display wire” must be connected to the “first connecting lines.” Applicant respectfully disagrees.

In a non-limiting embodiment described in the (substitute) specification at page 17, lines 16-28 “[w]hen VI tests for all the gate lines  $G_1$ - $G_n$  are finished, the *connecting portions 122 are cut along a cutting line L between the contact portions C1 and the driving signal lines 321 and 322* using an appropriate apparatus such as a laser trimming device.... When the connecting portion 122 is cut along the cutting line L between the contact portions C1 and the signal lines 321 and 322, two sections are created. [A]s a first section, connecting member 94A and 94B are each connected to a part of a respective connecting portion 122 on one side of the line L, and as a second section, the remaining connecting portions 122 on an opposing side of the line L are connected to gate wire 121 and 129, the first and second sections being electrically separated from each other. The disconnected two sections are respectively connected to the gate wire 121 and 129 and the driving signal lines 321 and 322.” As discussed above, support for this portion of the specification is at least found in originally filed Claims 11 and 12 and in the specification at page 15, lines 19 and 20 and page 15, lines 16-18 (page citations from the substitute specification attached herewith).

Applicant respectfully submits that after testing is completed and the connecting portion 122 is cut, the upper/shorter connecting member 94A is still disposed between the lower/right gate driving signal 321 and the connecting portion 122 (e.g., a “part” of the gate wire 121) between the cutting line L and the contact portion C1, whereby the upper/shorter connecting member 94A is *electrically disconnected* from the connecting portion 122 between the cutting line L and the contact portion C1. As discussed above, a “*part of the first display signal wire*” of Claim 1 may be considered as a portion of the upper gate wire 121 (e.g., connecting portion 122) disposed in between the cutting line L and the contact portion C1, such as illustrated in FIG. 6

Therefore, Applicant respectfully submits that at least Replacement sheet of FIG. 6 and the specification as originally filed illustrate “a plurality of first connecting lines disposed

between the first driving signal wire and *a part of the first display signal wire*, and connected to the first driving signal wire, wherein the first connecting lines are *electrically disconnected* from the part of the first display signal wire” of Claim 1.

Claim 9

The Examiner alleges that “second connecting line” cannot be in between “the second driving wire” and (another part of) “the first display signal wire,” and that the “another part” of the “first display wire” must be connected to the “second connecting line.” Applicant respectfully disagrees.

Claim 9 recites, *inter alia*,

“a plurality of second connecting lines disposed between the second driving signal wire and at least another part of the first display signal wire, and connected to the second driving signal wire,

wherein the second connecting lines are electrically disconnected from the another part of the first display signal wire.”

Similar to the discussion for Claim 1 above, as illustrated in FIG. 6, “second driving signal wire” may be considered as gate driving signal wire (e.g., upper/left gate driving signal wire 322), “second connecting lines” may be considered as connecting member (e.g., lower/longer connecting member 94B) and “first display signal wire” may be considered as gate wire (e.g., lower gate wire 121).

The “*another part*” of the first display signal wire of Claim 9 may be considered as a portion of the lower gate wire 121 (e.g., connecting portion 122) disposed in between the cutting line L and the contact portion C1, such as illustrated in FIG. 6.

Therefore, for all the reasons discussed above regarding Claim 1 and amended Figure 6, Applicant respectfully submits that at least Replacement sheet of FIG. 6 and the specification as originally filed illustrate “a plurality of second connecting lines disposed between the second driving signal wire and at least *another part* of the first display signal wire, and connected to the second driving signal wire, wherein the second connecting lines are *electrically disconnected* from the another part of the first display signal wire” of Claim 9.

Thus Applicant respectfully submits that Claim 1 and Claims 2-5, 7-10, 13-15 and 18-22 as depending upon Claim 1 satisfy the provisions of 35 USC §112, second paragraph.

Reconsideration and withdrawal of the relevant §112 rejections of Claims 1-5, 7-10, 13-15 and 18-22 are respectfully requested.

**Claim Rejections Under 35 U.S.C. §102**

The Examiner has rejected Claims 1-5, 7-15 and 18-22 under 35 U.S.C. 102(b) as being anticipated by Imajo et al., U.S. Patent Publication No. 2001/0015709 (hereinafter "Imajo"). Applicants respectfully traverse the rejections.

To anticipate a claim under 35 U.S.C. § 102, a single source must contain all of the elements of the claim. *Lewmar Marine Inc. v. Barient, Inc.*, 827 F.2d 744, 747, 3 U.S.P.Q.2d 1766, 1768 (Fed. Cir. 1987), cert. denied, 484 U.S. 1007 (1988). Moreover, the single source must disclose all of the claimed elements "arranged as in the claim." *Structural Rubber Prods. Co. v. Park Rubber Co.*, 749 F.2d 707, 716, 223 U.S.P.Q. 1264, 1271 (Fed. Cir. 1984).

Claim 1 recites, *inter alia*,

"a first driving signal wire transmitting driving signals for first display signal lines, wherein the first driving signal wire is separated from the first and second display signal wires, the switching elements, and the pixel electrodes, and includes a first pad connected thereto at its near end

a plurality of first connecting lines disposed between the first driving signal wire and a part of the first display signal wire, and connected to the first driving signal wire,

wherein the first connecting lines are electrically disconnected from the part of the first display signal wire."

In the detailed action in the Office action at Page 6 and as indicated in Attachment 2, it is alleged that Imajo discloses a liquid crystal device (Title) including drain lines DL (considered as "first display signal lines), gate data lines GL (considered as "second display signal lines), a lower portion of dummy bumps DBP (considered "first driving signal wire") and an upper portion of DBP (considered "first connecting lines").

Firstly, Applicants note with reference to the Attachment 2, that drain lines DL (extending vertically along the far right side of Fig. 26 in the Attachment) are labeled as "driving signal lines," but in the Office action are also considered a "display signal line." Applicants respectfully submit that drain lines DL of Imajo cannot be considered as both "driving" and "display" lines. Necessarily then, Imajo does not disclose "a first driving signal wire transmitting driving signals for first display signal lines, wherein the first driving signal wire is separated from the first and second display signal wires" of Claim 1.

Secondly, it is alleged at page 6 of the Office action and in Attachment 2 of the Office action, that the upper portion of DL proximate to DBP (considered “first connecting lines”) is disposed between the lower portion of DL (considered “first driving signal wire”) and a part (not labeled in the Attachment 2) of the drain lines DL (considered as “first display signal lines”), and connected to at least one of the lower portion of DL (considered “first *driving* signal wire”) and the part of the drain lines DL (also considered as “first *display* signal lines”). Applicant respectfully disagrees.

To the contrary, Figure 26 of Imajo clearly illustrates that the upper portion proximate DBP (considered “first connecting lines”) is disposed directly above the lower portion of DL (considered “first driving signal wire”) and in parallel to an adjacent drain line DL (considered as “first display signal lines”). The upper and lower portions are collinear and are merely in parallel with the drain line DL (considered as “first display signal lines”). That is, as indicated in Attachment 2, the upper portion of DL in Imajo is not disposed *between* the lower portion of DL and a “part” of the DL as claimed.

Therefore, Imajo does not disclose “a plurality of first connecting lines disposed between the first driving signal wire and *a part of the first display signal wire*, and connected to the first driving signal wire, wherein the first connecting lines are *electrically disconnected* from the part of the first display signal wire” of Claim 1.

Finally, it is further alleged on Page 6 of the Office action that the lower portion of drain line DL (considered “first driving signal wire”) is separated from the drain lines DL and gate lines GL (considered “first and second display signal lines”) and includes a first pad at its near end, i.e., at connection. For purpose of this response, Applicants assume that this “connection” referred to is bump BP between the upper and lower portions of the drain lines DL.

Since the lower portion of the drain line DL in Imajo is part of the drain lines DL, the lower portion of the drain line DL (“first driving signal wire”) is in no way “separated from” the drain lines DL (“first display signal line”), contrary to the claimed invention. Furthermore, the bump BP is not disposed at “an end” of a line, but to the contrary, is in a mid-portion and connects two lines.

Therefore, Imajo does not disclose “a first driving signal wire transmitting driving signals for first display signal lines, wherein the *first driving signal wire is separated from the first display signal wire*, and includes a first pad connected thereto *at its near end*” of Claim 1.

Thus Imajo fails to disclose all of the limitations of Claim 1. Accordingly, Imajo does not anticipate Claim 1. Applicant respectfully submits that Claim 1 is not further rejected or objected and is therefore allowable. Claims 2-5, 7-10, 13-15 and 18-22 variously depend from Claim 1 and are correspondingly allowable. Reconsideration, withdrawal of the relevant §102 rejections and allowance of Claims 1-5, 7-10, 13-15 and 18-22 are respectfully requested.

### Conclusion

All of the objections and rejections are herein overcome. In view of the foregoing, it is respectfully submitted that the instant application is in condition for allowance. No new matter is added by way of the present Amendments and Remarks, as support is found throughout the original filed specification, claims and drawings. Prompt issuance of Notice of Allowance is respectfully requested.

The Examiner is invited to contact Applicant's attorney at the below listed phone number regarding this response or otherwise concerning the present application.

Applicant hereby petitions for any necessary extension of time required under 37 C.F.R. 1.136(a) or 1.136(b) which may be required for entry and consideration of the present Reply.

If there are any charges due with respect to this Amendment or otherwise, please charge them to Deposit Account No. 06-1130 maintained by Applicant's attorneys.

Respectfully submitted,

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